

6

SPECTACLE SECRETS.

BY GEORGE COX.

SECOND EDITION.

LONDON :

PUBLISHED BY THE AUTHOR, 128, HOLBORN HILL ;

AND SOLD BY

COX, 100, NEWGATE STREET ;

HAMILTON, ADAMS, & CO., PATERNOSTER ROW ;

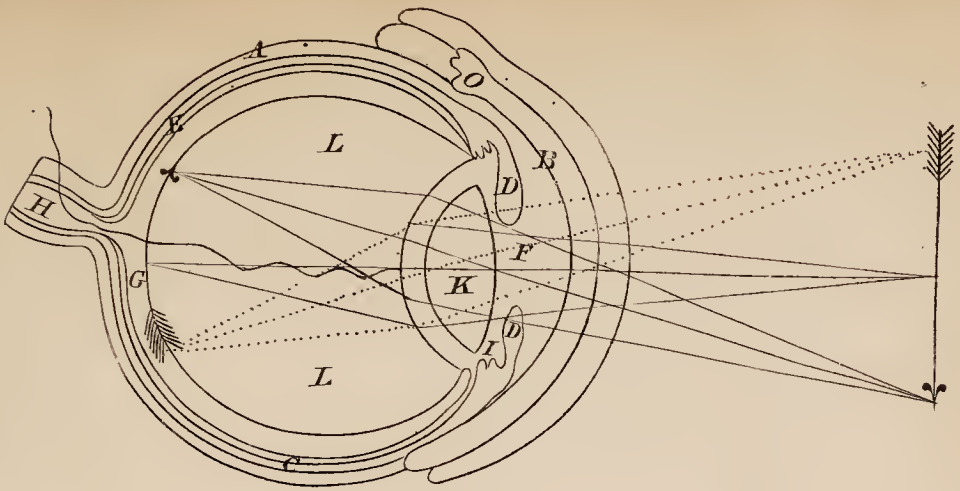
COX, 5, BARBICAN ;

AND BY ALL BOOKSELLERS AND OPTICIANS.

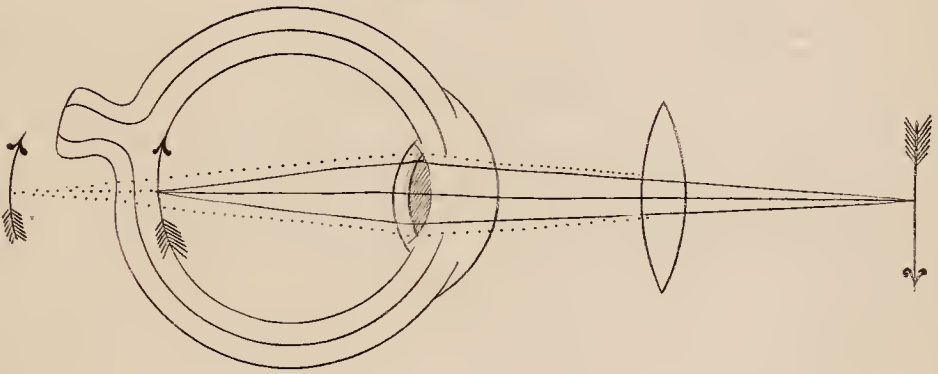
1844.

~~~~~  
BASINGSTOKE:—PRINTED BY ROBERT COTTLE.  
~~~~~

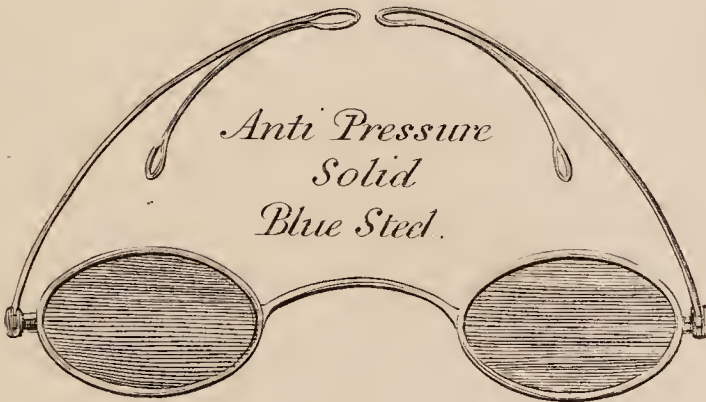
Nº 1.



Nº 2.



Nº 3.



Nº 4.



Nº 5.



Nº 6.



Nº 7.



Nº 8.





Digitized by the Internet Archive
in 2020 with funding from
Wellcome Library

<https://archive.org/details/b31911778>

PREFACE.

EVERY effort of human ingenuity professing to remove or lessen pain and inconvenience, is, naturally enough, hailed with approbation, and the public require not so much to be aroused to estimate fully the advantages proposed, as to be guarded against implicit belief and heedless confidence in the value and importance of the remedy. It is, however, of the utmost importance to be accurately informed what kind of benefit we may fairly expect from the use of the given means, and to what extent this benefit may be obtained; and yet the man who steps forward to state this plainly and fairly, too often fails of the success which his undertaking deserves. Experience proves that such endeavours have been contemned by some, looked upon with cold indifference by others, and viewed with suspicion by nearly all. We are too apt to suspect interested motives, to doubt the sincerity, and undervalue the abilities of men, who have devoted their lives, and the force of their talents, to a particular pursuit; and then, as though this cunning incredulity was closely allied to implicit credence in the wildest chimeras, we become ready listeners, and passive victims, to pompous and plausible charlatans, who make the largest promises, alike indifferent to the practicability or usefulness of their specifics. "It is a great mistake," said an able English statesman of the last century, "to suppose men harmless because they are blockheads; the dunce thinks neither of country nor of consequences in the pursuit of his petty interests and passions, which may, and often do, lead him to work the greatest public calamities."

I have refrained from advancing any crude theoretical opinions, which might fairly be questioned. The information conveyed in these pages is of a practical character ; has stood the purifying test of time ; and, being based upon the immutable principles of optical science, courts every enquiry and challenges all investigation.

My object has been to provide the public with a compendium of sound and standard information on this most interesting and essential subject, in order that, possessing themselves of the truth, and becoming conversant with the real merits of the question, they may no longer be the victims of ignorant, designing, and knavish speculators, who so mercilessly practise on their credulity. I have freely availed myself of facts and observations with which I have become familiar in the course of my own experience and connexion with an establishment of more than one hundred years' standing, and, at the same time, have endeavoured to condense in one publication the essence of many voluminous treatises.

“It is only by condensing, simplifying, and arranging in the most lucid manner possible, the acquired knowledge of past generations, that those to come can be enabled to avail themselves to the full of the advanced point from which they will start.”

I have only to add, that though I would not desire to offend the critical acumen of any of my readers, yet, having but little leisure, and those moments of rest being snatched from the busy whirl of commercial pursuits, I have been much more anxious to give solid information in language universally understood, and divested of technicalities, than to employ nice set terms, chosen to please the critic's curious ear.

GEORGE COX.

The first edition of this work having found a ready sale, spite of all the opposition and abuse lavished against it by the itinerant *opticians*, I have reprinted it with such improvements as the kindness of friends and my own experience have suggested.

128, HOLBORN HILL, LONDON,
January, 1844.

Reviewers' Opinions of this Work.

“The information which this little book contains is really very good and very applicable to the instruction both of the short-sighted, who never reflect before they buy, and of the very long-sighted, who, from excess of cunning in the search of great bargains, are, like our friend Moses in the Vicar of Wakefield, open to very *gross* impositions in the matter of spectacles and their very *chagrin* cases. Those who are not opticians or oculists will do well to read the book before they commit themselves in the purchase of glasses either from itinerant or stationary quacks. But this is not all: though a simple monograph of the frauds of one trade, the book may be generalized into “a manual of the whole art of puffing,” and an exposure of the silly credulity of the public in all its branches. Mr. Cox also discloses some of the machinery of newspaper puffing in a way which almost tempts us to claim it as “our thunder,” it is so much in unison with our published opinions on the subject.”

Athenæum.

“In this well-written work Mr. Cox has given a popular description of the eye, and the adaptation of spectacles to correct constitutional defects or organic disease: by attention to a few simple rules which he lays down, any one may effectually fortify himself against the artful representations of dishonest dealers in spectacles “made to sell.” The public is indebted to Mr. Cox for having exposed the tricks of the insidious marauders in several towns in which they were practising their impositions, and his tract contains some correspondence between him and several eminent surgeons, from which it appears that they had been represented as vouching for pretended improvements in spectacles, of which they either knew nothing at all, or with regard to which they themselves had been deceived by the fraudulent pretenders.”

Christian Advocate.

“ This is a useful little work, treating on a subject of universal importance—namely, defining the laws by which deficiency of sight can be assisted, founded on scientific principles, and aided by extensive observation in a long practice ; we would recommend a perusal of the pamphlet to such as are about to seek the aid of the maker of spectacles.”

Morning Advertiser.

“ This little *brochure* is correct, ingenious, and useful : moreover, it is valuable as exposing the gross ignorance, impostures, and frauds of Jews, pedlars, and other locomotive quacks. The humbug of *amber* spectacles, *coloured* pebbles, clarified crystals, &c., is here thoroughly exploded. Altogether the information in this pamphlet is well deserving of attention.”

Aldine Magazine.

“ An amusing exposure of the puffing and swindling systems pursued by some self-styled opticians, from which besides may be gathered a good deal of sound, practical information.”

Era.

“ If every body’s sight were impaired, we should strongly hope that this little treatise would become universally known ; but as we have reason to believe there are some people in the world who can see a little, we shall only address ourselves to the former, to whom we can confidently recommend the perusal of this talented work. Besides a great deal of necessary and sound information on the use and nature of spectacles, we find a number of *exposés* of the tricks pursued by many unprincipled persons styling themselves opticians, which is put forth by the author in a very distinct manner.”

Blackwood’s Lady’s Magazine.

CONTENTS.

CHAPTER I.

| | Page. |
|---|-------|
| Invention of Spectacles and Burning Glasses | 1 |
| Examination of Opticians—Artful Impositions | 2 |
| Duke of Wellington and the Bubble Schemes | 4 |
| Basis of Optical Knowledge—Physiology of the Eyes | 6 |

CHAPTER II.

| | |
|--|----|
| Failure of Sight and the Application of Spectacles | 10 |
| Lenses—how to determine their Focal Lengths | 12 |
| Brazil Pebbles—Periscopic and Parallel Lenses—Process of | 13 |
| Working—Tests of Quality—and Experiment | 14 |
| Railroad Spectacles—Neutral Tint Shades | 16 |
| Country-made Spectacles—Trial Box of Sight | 18 |

CHAPTER III.

| | |
|---|----|
| A Visit to the Optician—Rules for selecting Spectacles .. | 21 |
| Spectacle Frames—Russian Remedy for Short Sight | 24 |
| Solid Blue Steel Spectacles | 26 |
| Anti-pressure Spectacles—Single Eye Glasses injurious .. | 27 |
| Prices of Spectacles | 28 |

CHAPTER IV.

| | |
|---|----|
| Specious Quackery—Testimonial Writers | 30 |
| Amber Spectacles analysed—Puffing Advertisement | 33 |

| | Page. |
|---|-------|
| Opinions of Dr. Neil Arnott, Dollond, Curtis, &c. | 34 |
| Absurdity and Ignorance of Puffing Advertisers, | 36 |

CHAPTER V.

| | |
|--|----|
| Instances of Gross Imposition—Clarified Crystals and Coloured Pebbles! | 37 |
| Naval and Military Officers—Definition of LAW | 39 |
| Ladies and Spectacles—Persevering Roguery | 41 |
| An Old Clothes Man Metamorphosed | 43 |

CHAPTER VI.

| | |
|--|----|
| Specimens of Puffing Advertisements, | 44 |
| Royal Patronage—Cataract Alarmists | 45 |
| Abstract of Act of Parliament. | 46 |
| Newspaper Paragraphs, | 50 |

CHAPTER VII.

| | |
|--|----|
| Provincial and Metropolitan Scheming | 52 |
| Public Cautions—Tricks at Brighton | 56 |
| Liverpool Mercury—Parabolic Cheats | 60 |

CHAPTER VIII.

| | |
|--|----|
| Correspondence with the Duke of Wellington. | 61 |
| ————— Frederick Tyrell, Esq. J. Hodson, Esq. | 62 |
| Signatures of J. Soden, Esq., J. F. Ledsam, Esq., ————— Alexander, Esq. | 64 |
| Correspondence with Robert Keate, Esq. | 64 |
| Pretended Discoveries, Humorous Scraps, &c. | 66 |

SPECTACLE SECRETS.

CHAPTER I.

“ Science should be stripped of every thing that tends to clothe it in a strange and repulsive garb, and especially every thing that, to keep up an appearance of superiority in its professors over the rest of mankind, assumes an unnecessary guise of profundity and obscurity, should be sacrificed without mercy.”—SIR I. F. W. HERSCHEL.

SPECTACLES and side-saddles, we are quaintly informed, became common in England in the reign of Richard the Second. The ancients, however, knew the power of burning-glasses, and one cunning rogue, we are told, discovered a new way to pay old debts, by means of a round stone or glass used in lighting of fires, with which he melted the bond, written, as usual in those days, on wax. Their burning glasses were spheres, either solid or full of water, their foci were consequently very short and confused. A long interval occurred before spectacles were constructed, and three hundred years elapsed between the invention of spectacles and telescopes.

Our eyes should have our nicest and most tender

care, since it is by them we are familiarized with objects of the most exquisite interest and beauty, abounding on the earth we inhabit, and in the starry firmament above us :—

“ My soul, while Nature’s beauties feast mine eyes,
To Nature’s God contemplative shall rise.”—DODSLEY.

The faculty of sight should be estimated and regarded by us with more than ordinary care, when we reflect that it is the medium through which the most exalted and gratifying impressions are received; and our watchful regard to its healthful preservation and agreeable exercise is the more required from the consideration, that while to its admirable organization and delicate sense of perception we stand so much indebted, those very qualities render it extremely sensitive to injudicious treatment.

It would be a wholesome, fair, and proper regulation, to restrain all from practising as opticians but those practically conversant with the production and application of lenses for the purpose of aiding the exercise of sight. It is considered indispensable for the surgeon and medical practitioner to prepare for his profession by a course of study, reading, and practical operations, and to be subjected to an ordeal where his capabilities are examined and tested. Such an arrangement, though it *may* sometimes be abused, guarantees to us practitioners who understand their duties; and thus are the many “ ills which human flesh is heir to” alleviated and subdued, while those unfortunates who are practised upon by the empiric and miracle-monger, have their calamities aggravated, and their sufferings increased.

It is a question often mooted, how far it is the duty of a just and equal government to interfere in such

cases for the protection of its subjects : this, however, is evident, that whatever restrictive laws are framed, if they are attempted to be enforced while a want of information prevails upon the subject, the very people for whose benefit and protection they are introduced, will, likely enough, view them with distrust and suspicion, and, until the imposition has been unmasked, will look upon those who have assumed characters not their own, as persecuted individuals, entitled to their sympathy rather than their detestation. It is by diffusing information, and clearing away obscurity, that we shall erect the best safeguard against delusion. Those who are ignorant are consequently credulous, superstitious, and undefended against the tricks and subtleties of the artful and designing.

If a book is published, our opinion is almost insensibly influenced by what the reviewers say of it. If a new association, a company, or enterprise of any kind is projected, we look to the list of directors, committee, and patrons. Our education and universal custom induces us to pay deference to those whom we suppose to be possessed of superior information, to be men of character and reputation, and entitled, from their position in society, to be regarded with respect.

These legitimate feelings have been so poisoned and tampered with by those who have designedly entered into a conspiracy to hoodwink the people, and share the plunder ; and again by the hardly less criminal apathy of others, who, without dividing the spoil, have suffered the trickery to pass unexposed ; that professional and literary men cannot but perceive distrust and want of confidence in their decisions, now becoming general among the reflecting and intelligent classes of society,

who see that they have been trifled with, and treated as credulous dupes, and that they really have no guarantee for the merits of a production, the purity of a proposal, or the honesty or propriety of any measure to which distinguished names and lofty patronage are appended. The exposè of the practices of the railway, mining, and other bubble schemes illustrates this truth; and the secrets elicited during the discussion on Mr. Serjeant Talfourd's Copyright Bill, clearly demonstrate how infamously the confidence of "a generous public" has been abused.*

The great and benevolent men who existed before us, and devoted their time and contemplations to the interesting science of optics, have fully and clearly demonstrated the laws which regulate the action of light, the cause and effect of luminous phenomena, and the principles upon which vision depends. We have the con-

* In the month of August, 1838, the solicitor to the Duke of Wellington waited upon Sir Frederick Roe, at Bow-street, in reference to the use which had been made of his grace's name by "The London Equitable Loan Company." A gentleman, who was desirous of purchasing shares in the company, seeing the Duke of Wellington mentioned as patron, and that the account of the company was kept with the Bank of England, wrote to the Duke to ascertain if it were true that he was connected with the concern? The duke never had consented to become a patron, but, on the contrary, when asked to do so, answered that he was so situated that he could not comply with their request. On receiving the communication the duke wrote to Sir F. Roe, to see what could be done to guard the public against any transaction which might be entered into in consequence of the use made of his name; and in answer to a letter written by him to the Bank of England, he was informed "that no such company was known there, nor had they any account of the London Equitable Loan Company." The publicity given to this manœuvre has no doubt saved many a family from enthrallment and destitution.

clusive and unvarying results of their numberless experiments, performed under every modification of circumstances, to guide us in establishing principles and rules of action, which the studious and practical opticians of our own times have tested, and, ascertaining them to be free from error, now adopt and act upon them.

The captious and consequential may complain of this admission, as tending to detract from the importance with which they might otherwise be regarded ; but the optician, who deserves that name, is not anxious to array himself in borrowed plumage, nor to appropriate as his own that which rightfully belongs to others. Granted that we act upon settled and incontrovertible philosophical principles, is it not infinitely more gratifying to have the assurance of a correct result, than to be for ever experimentalizing without arriving at a satisfactory conclusion ? The skilful surgeon and the talented engineer are guided in their operations by certain fixed and universal laws, yet no one will dispute that to perform the duties of either of those professions requires much application, skill, and expertness. Precisely so with the optician of the present day. He has fixed, universal, and certain data for his operations ; and it is upon his intimate knowledge of these, and the careful and judicious application of them, that his success depends.

When the healthy powers of vision begin to fail, we feel a tender and anxious concern to perpetuate the enjoyment we find to be so intimately dependant upon the uninterrupted exercise of sight, and are instinctively led to seek for a remedy. Much mischief will be avoided, and misapprehension removed, if we consider that in applying artificial aid to the eye, we have to do with

one of our most sensitive and easily deranged organs. The human eye is composed of a series of humours and membranes: the outer coating, called the *sclerotica* (*a*), see *Plate, Fig. 1*, is exceedingly strong, and the muscles which move the eye are attached to it; the white of the eye is a portion of this coating. The *cornea* (*b*) arches out or projects from the eye-ball; it is transparent, and of a circular form. The next coating to the *sclerotica* is called the *choroides* (*c*); it has no muscular motion except at its extremities, near the front of the eye. The *iris* (*d*) is next apparent; it attaches itself to the *sclerotica* by a cellular substance called the *ciliary circle* (*e*). According to the colour of the iris the eye is termed black, blue, hazel, &c. It is composed of two sets of muscular fibres, the one tending, like radii, towards a centre, the other forming a number of circles concentric with the same centre. The aperture in the iris is called the *pupil* (*f*); it is always round, but varies in diameter as the radial or the circular fibres of the iris are contracted or expanded, according to the quantity and quality of light it is required to admit, acting like a watchful centinel to regulate the amount of rays requisite to transmit a perfect and well-defined image of objects onwards to the brain, which, without its agency, would appear one undistinguishable mass of confusion. The chamber of the eye is darkened by the posterior surface of the choroid membrane having a lining of dark-coloured mucus, called the *pigmentum nigrum*. The last coating of the eye is the *retina* (*g*), a delicate and most important membrane in the construction of this noble instrument; it is an expansion of the *optic nerve* (*h*), directly emanating from the brain; and is spread like a net of exquisite delicacy all over the surface of the choroides,

terminating at the ciliary ligament. It receives the images of objects by means of the rays of light that enter at the pupil; it is transparent, but appears black on account of the dark pigmentum behind it. The optic nerve passes through a small aperture in the “*architectural dome*” containing the eye, and it conveys the impressions made on the retina into the depository of the brain, where the “very form and spirit of the scene is now conceived.” It is situated a little on one side of the centre of the eye, inclining towards the nose.

To describe more minutely the various fibres, humours, and ciliary processes of the eye, or to enter more fully into its anatomical arrangement, would be incompatible with the design of this publication, which is intended for the “general reader,” and therefore so simplified as that it is hoped he cannot fail to understand. The three transparent humours enclosed by the coats of the eye, viz., the *aqueous* (*i*), the *chrystalline* (*k*), and the *vitreous* (*l*), are, however, too important to be passed over without some notice. The aqueous (*i*) humour it is which gives a protuberant figure to the cornea (*b*); it has a refractive power, similar to that of water, which it also resembles in appearance. The chrystalline (*k*) humour is more transparent than the purest chrystal; its form is that of a double convex lens, which it also resembles in its use, as it converges the rays which pass through it, from every visible object to its focus on the retina. It is suspended in a fine transparent sheathing. The shape or convexity of this natural lens alters occasionally, and shifts a little backwards or forwards in the eye, so as to adapt its focal distance from the retina to the different distances of objects. The vitreous humour is situated at the back of the chrystalline, filling

nearly three-fourths of the globe of the eye; it is surrounded by a thin capsule, which sends off a number of membranous processes into the vitreous substance, where they form cells, which, communicating with each other, give a high degree of firmness and tenacity to the whole.

Fig. 2. represents the eye at the time when spectacles are required, the cornea, or the chrystalline, or both, having lost a part of their natural convexity, consequent upon age or constitutional weakness. An object placed at the same distance from the eye as in the perfect eye, (*Fig. 1*), has the focus carried beyond the retina. A convex lens applied to the eye compensates for this loss of capacity, and, converging the rays, corrects the focal distance, and the image is now imprinted naturally on the retina. The reverse of this takes place in the case of the short-sighted; the humours being *more* convex than in the perfect eye, the rays converge in a focus *before* they reach the retina. A concave lens carries the focus further on, and, by its aid, an object will be depicted perfectly on the retina.

No. 4 represents a plano convex lens—5, a double convex—6, a plano concave—7, a double concave—8, a periscopic or meniscus lens.

What grandeur and sublimity of contrivance is here blended with simplicity of action and power of expression! How indispensable to a full appreciation of the bounties of nature and the beauties of art by which we are surrounded! To be deficient of this heavenly gift is truly to have “wisdom at one entrance quite shut out.”

Surely every consideration should influence us to treat this invaluable faculty with judicious care, instead of allowing it to be tortured and trifled with by the ignorant and unprincipled.

Having surveyed the general construction, and glanced at the inimitable mechanism of those windows of the soul, we shall be better prepared to understand the reasoning, and to comprehend the principles upon which the science of optics is based. Those of my readers who have leisure to pursue this subject, will find new light, and more convincing illustrations attend their enquiry at every step. It is a subject abounding in beauty and interest, introducing us to new regions of sublimity and grandeur, where the contemplative mind will assuredly find “ample scope and verge enough” to gratify its most exalted anticipations. We have seen the admirable, yet at the same time delicate contrivances by which the functions of the eyes are performed. It cannot fail to have occurred to us, that a machine so beautiful and complete is liable to derangement and improper treatment by the wayward and the ignorant. If it is desirable that a person possessed of a well-constructed watch should understand its general action, and know what treatment it should have to keep it in sound and underanged order, still more essential is it that every individual should possess a clear and familiar knowledge of the nature of vision, and understand the requirements of the eyes. I cannot forbear indulging a sanguine hope that the circulation of this little manual will open the eyes of its readers to the simple facts of the case, and animate them to think and judge for themselves, instead of giving a ready ear to the marvellous and ridiculous tales, which, though, like the sailor’s tough yarn, so often told that the cheat believes them himself, are nevertheless utterly devoid of truth.

CHAPTER II.

“The subject is of universal importance, since every man, woman, and child in the empire will probably require optical assistance.”—ABBOTT.

THE eyes, when in a sound and healthy state, instinctively adjust themselves at a distance of twelve inches from a book or paper, when they are observing the same. This distance is found to be most natural and agreeable; for when we extend it to sixteen, twenty, or thirty inches, the chrystalline lens is stimulated to keep a distinct and clear perception, until, as the distance increases, the object becomes less and less perceptible. When we are compelled to extend this natural distance, experience difficulty in reading small characters, or find it necessary to get more light on what we are observing, we may safely conclude that artificial assistance is needed, and that, judiciously applied, the tendency to decay will be mildly arrested.

The design of spectacles is to supply the loss of power which is experienced by the eyes at different periods of life, and arising from various causes. These productions of art are constructed with a close observance to, and act upon, the same principles as those by which the process of vision is regulated.

Spectacles ought not to do more than maintain or preserve to us the capability of seeing at the natural distance. This is, in fact, all they are intended to effect. When the chrystalline lens of the eye, losing its convexity, fails to converge the rays of light, and bring them to their natural focus on the retina, an artificial lens, of suitable convexity, supplies to it this capability, and compensates for its gradual diminution of capacity. Thus lenses for assisting the sight are fashioned upon the optical principles so apparent in the mechanism of the eye itself, which, it will be observed, is neither round nor flat, but of that nicely moulded convexity which is indispensable for the performance of its functions. If lenses were either spheres or planes they likewise would be ineffective for the purpose proposed.

There is not any material in existence beside pebble and glass, which is calculated for spectacle purposes. The pretended “improvements,” “pellucid lenses,” “refractive transparencies,” “patent amber,” “chrystal preservers,” &c., are new-fangled terms, coined to entrap the uninitiated.*

Convex lenses are produced by a series of operations through which a glass or pebble passes, as shaping out from the rough piece, affixing them to the block or

* The manufacture of glass was known very early, but glass perfectly transparent and colourless was reckoned so valuable, that Nero is said to have given a sum equal to £25 for two moderate sized colourless drinking glasses.—*Starke's Oriental Letters*.

Glass for optical uses is heavy, homogeneous, free from streaks and veins. More expensive chemical substances are employed in its manufacture than are used in making common glass.

frame on which they are worked, grinding their surfaces to the form and focus required, in brass or iron tools of the curvature or radius corresponding. Thus to produce a glass or pebble of any given focal length, we use a tool which is a portion of a sphere or globe of four, five, ten, or any other given radius, or half its diameter. For spectacles usually required, the focus of the pebble or glass, thus fashioned, varies from sixty inches down to five inches. The focus of a convex or magnifying glass is ascertained very readily, thus: hold the lens near to a white surface, as a sheet of writing paper, pinned to the side of the apartment opposite to the window; shift the lens gently backwards and forwards, until the objects before it, as the window frames, flower pots, or the Venetian blinds, are seen inverted upon the paper, clearly and distinctly measure the distance from the paper to the lens, and this distance is the focus: or, by placing a candle at the distance of twelve feet from the paper, and measuring, as before, when the reflected image of the flame is shown most accurately on the paper, we again have the focus denoted. The one method is as much practised as the other; though, in ordering a lens of a given focus, I would recommend a person always to state the method by which he has determined the focus; whether by the sun, or candle-light, which will prevent any mistake arising from the disparity between the two plans pursued.

Concave lenses are made upon the same principle, and pass through similar processes. They are designated by numbers, thus: a concave lens, worked in a tool of four-inch radius, is termed No. 12; five-inch, No. 10; ten-inch, No. 6. &c.

To determine the radius or focus of a concave lens, apply to its surface a convex lens of the same focus, and holding the two together as one glass, between the thumb and finger, at some distance before the eye, give the hand a gentle motion to and fro, and if the objects looked at through the lenses now in contact appear fixed, equal, and of their natural size, then is the focus of the one correspondent to that of the other ; but if the convex lens is not of the same focal length as the concave to which it is thus applied, then all objects looked upon will appear to shake and have a tremulous motion.

Another method of ascertaining whether one concave lens is of the same number, and worked in tools of the same radius as another, is to hold one in each hand, placing their edges against each other, with their centres in a parallel line ; now withdraw ten or twelve feet from the window, and observe the top and bottom bars of a square of glass : if they appear equal and uniform in all their parts, parallel to each other, and agreeing with the other squares in the window, then are they of the same radius ; but if they do not match, the bars will appear disjointed, and higher or lower in one square than in the other. The trial box of sights will be found very useful in making these experiments.

Brazil pebbles, or crystallized quartz, are imported to this country in rough blocks ; these are cut or slit, by the aid of pulverized diamond, into slabs or pieces, of the diameter required. Those pieces in which bubbles, waves, or blemishes appear, are thrown aside by the optician who is tenacious of his fair fame, as their imperfections become more apparent in every after-stage of

their progress ; and when polished, centred, and shaped for the spectacle-frame, they are really improper to be used at all ; nevertheless, the needy, or dishonest, rather than lose a fraction of their gains, often persist in working up such imperfect material, and harping upon their being pebble—real pebble—palm them off upon the uninitiated as genuine articles. Pebbles have the following important advantages : they are of equal density, and exceedingly hard, firm, and clear ; their surfaces are not liable to become misty or scratched (which circumstance alone often compels a change of glasses) : they are of a pure, cool nature, and shew this contrast to glass (which is, on the contrary, produced by the action of artificial heat) in the touch of the finger or tongue to their surfaces.* They are, in consequence of these properties, calculated to suit the sight for a longer period than glass ; but they need not be thrown aside, when, from the indications already referred to, we find an increase of magnifying power is required, as they can be re-worked readily enough to meet the requirement of the eyes, and at an expense scarcely more than a new pair of glasses, or about one-third of their original cost. The directions for ascertaining the focus of concave or convex pebbles, are the same as described for concave or convex glasses.

This consideration should weigh with those who are apt to be misled by the pretensions of the unprincipled ; for pebbles have, in common with many other crystals,

* Pebbles, again, are proved by grinding the edges briskly on a moderately smooth file, or porous stone ; they will resist the action of these, and emit sparkles of light as the velocity of the friction is increased, while glasses, on the contrary, yield, and are ground without difficulty.

a double refracting property, which, if the pebble is cut carelessly, exhibits itself by painfully affecting the vision ; two objects, instead of one, are seen, causing a confused and agitating sense of indistinctness, which, in proportion to the exertion of the eye to overcome it, is the more tiresome and distressing. Such faulty and blemished articles, technically called *wasters*, are refused by the optician of any real respectability and character, but are eagerly bought up by those venders, whose object is to purchase what costs them the least money, alike ignorant of, and indifferent to, any other consideration.

Pebbles, therefore, like all the precious stones, which, in fact, are crystals, cannot be properly cut or sliced except in a parallel direction to their natural faces.

Periscopic or meniscus lenses were introduced in the year 1770, and revived at a later period by Dr. Wollaston. Their properties were investigated by many scientific persons, and again candidly examined by Mr. W. Jones ; yet, notwithstanding the oblivion to which they were consigned by the universal consent of practical opticians, they are still foisted on the public, under various disguises, and embellished with sundry new appellations. They are concave on one side, and convex on the other, the inner and outer curve differing, in order to produce a focus. When placed in the spectacle-frame, their convex surface is always from the eye ; this necessarily exposes their centres to be rubbed and scratched. The halo, or aberration of light, is greater in lenses of this form than in any other. This can be easily proved by placing a double convex, and a periscopic lens, each of the same diameter and focus, say one-and-a-half inch diameter, and three or four inch focus, edgeways together.

Let the image of a lighted candle be thrown against a white wall or paper, in a dark situation, through the two lenses, and it will be conspicuously seen that the periscopic lens exhibits this dazzling indistinctness, while in the double convex lens it is scarcely perceptible.

Parallel or flat surface lenses are produced from tools perfectly level, and without any curvature. For spectacle purposes their only use is as shades or shields for the eye, to protect it from the effects of bright and dazzling objects, dust, and wind. They are, however, indispensable in the construction of sextants, artificial horizons, and other mathematical instruments.

Spectacles for travelling by rail-road, on the old beaten path, or by vessels, are usually fitted with parallel glasses, unless the wearer requires focal power as well as a screen, in which case they are of the concave or convex figure, before explained. Almost every combination of light and shade has been used for this class of spectacles; violet, grey, blue, green, crape, wove wire, &c.; but some sensitive and tender eyes failed to receive the relief expected from any of these, and opticians have been repeatedly baffled in their attempts to produce a shade of glass congenial to the requirements of the eye under such circumstances. I have made extensive use of the new neutral tint, or twilight tinge glass, and find it most agreeable to the eye while employing it, and when removed, it leaves the vision undisturbed by the flickering and confused halo so much complained of after wearing other coloured glasses. The cause of this superiority is clearly seen when we remember that, after taking off a pair of green glass

spectacles, every object appears of a red colour, while, upon the removal of blue colours, an orange or yellow mantle seems to rest on all which meets the view.

It is of consequence that all such glasses should be really parallel, otherwise a broken and disjointed appearance will be given to objects, the rays of light being abruptly dispersed instead of being transmitted through the transparent medium to the eye, in their natural direction. I have always discountenanced the use of wire, gauze, crape, and muslin substitutes for glass, because, in my opinion, it is a fallacy to assert that they are cooler and more agreeable to the eye. There is abundant space for the circulation of air in the region of the eye if the spectacle-frame adapts itself pleasantly to the wearer's face; while the eye and common sense may answer together, that to look on things around us, a transparent medium is preferable to a hazy and indistinct one. We do not choose bars and gratings, or coarse curtains, in preference to glass, for the windows of apartments; but if the light is sometimes too intense, we place a shade to soften its dazzling effects. Such precisely is the reason why tinted glass spectacles, for defending the eyes from rain, dust, and wind, are recommended.

Lenses worked by machinery are produced in greater quantities, within a given time, than those worked by hand. They are passed through the different stages of grinding and polishing without having the keen eye of the workman carefully watching their progress, and adjusting the inequalities in their surfaces or edges, which will always appear more or less in the course of working,

The price at which competition demands those lenses shall be rendered, operates against the wearer of spectacles ; for the producer cannot afford to throw aside such as are faulty, and the wholesale agent and retail dispenser cannot expect to have, at the low price charged, lenses which will bear a critical examination ; and thus all which can possibly be used are thrust into frames of one kind or other, from the common iron or horn sold by the poor hawkers at six-pence, eight-pence, and one shilling per pair, to the more expensive frames ; while many faulty glasses, after being dubbed with some ear-tickling appellation, and imbibing extraordinary “light-modifying and refractive virtues,” by passing into the hands of the hawker of a higher class, are palmed upon the unfortunate spectacle-purchasers who are simple enough to give credence to the wondrous tale.

Women and children are chiefly employed to cut and edge those cheap glasses to the spectacle frames ; and who can expect they should do them better for the price ? And if one glass should be unequally thick, like a wedge, while its companion in the same spectacles is miserably thin ; or if the centres, instead of being equidistant from all parts of the rim are nipped into a corner ; how *can* you feel surprised when you consider that for them to earn a living, it is necessary they should finish several dozen pairs per day, and therefore, expedition, rather than excellence, is the point at which they aim ? In many departments, where machinery has supplanted manual labour, the work produced is of a superior character, and will bear more critical examination ; but the contrary is the fact in the case of machine-

worked optical glasses, and is more especially apparent in such as are intended for microscopic and achromatic purposes. It cannot be denied that, for all such uses, lenses worked by hand, with the ordinary care of a skilful workman, as much excel those produced by machinery, as the accurate and scientific touch of the artist eclipses the random splash of the plasterer.

The trial box, or frame of sights, ranging from the slightest focal power down to the deepest, is a very useful apparatus, both for the optician and his patient. It consists of eight or nine spectacle-fronts, clamped together at one end by a rivet, on which they are yet free to move. The focus of each pair is stamped on the front. They are enclosed by a pair of lids, which forms a handle, to be held by the hand, while one front after another is placed before the eyes, to determine what focus yields the desired assistance. This being ascertained, and having noted down the power we find to suit most naturally, as explained when treating of convex lenses, page 12, we have only to determine what style of mounting we prefer, and whether we will have glasses or pebbles, for the optician to suit us at once with lenses adapted to the sight, and mountings fitting pleasantly to the head. If an interview with the optician is impracticable, it will be ensuring greater accuracy, to mention the exact distance, measured as a straight line from the centre of the pupil of one eye to that of the other; and if the nose, on the bridge between the eyes, is flat or prominent, broad or narrow, since spectacles, suiting the sight most accurately, are frequently an annoyance, rather than an assistance, to the wearer, from these particulars being unheeded.

Two trial boxes comprise the range of convex sight, one for young persons, and those who require spectacles for the first, second, or third time ; the other for those eyes which have been long accustomed to spectacles, or from some constitutional or sudden cause, need those of strong magnifying power. The third box contains concave lenses, ranging from No. 1 to 12, which are the sights chiefly wanted, although, in extraordinary cases, No. 13, 14, and even 20, have been required.

Although, throughout this treatise, I have endeavoured to convince my readers that they may and ought mainly to determine for themselves, yet I would recommend a visit to the optician, where it is practicable, in preference to a description of the case ; for the same reason that the best written statement of a patient's malady, sent to a physician, does not afford him that familiar acquaintance with the case which an interview of a few minutes would supply.

CHAPTER III.

“ Every day’s observation shews how far some men may be carried from the most evident and obvious truths, to support a new hypothesis, which has no foundation either in nature or reason ; but truth will ever control and prevail over error, though supported with all the powers of rhetoric and novelty.”—B. MARTIN.

WHERE distance, or any other cause, prevents our having access to persons who are competent to suit us properly with spectacles, great care should be exercised to choose those which cause the print of a newspaper, or the ordinary types of a book, to appear of their natural and proper size, while they are viewed at the distance most agreeable for reading, viz., twelve inches from the eye. It is evidently better to “try spectacles” on such ordinary printing as they will be generally exercised upon, than to test them by the very small print with which persons frequently provide themselves. To decipher this, a greater power is demanded than is requisite for usual reading, writing, and needlework, which are the purposes for which we require them, and not for microscopic observation, nor for distant views.

The eyes in which no malformation or disease exists, but which simply partake of constitutional decay, or, from too continued application to sedentary and studious

pursuits, are beginning to feel a want of assistance, should have spectacles of sixty-inch focus, which is an exceedingly slight magnifying power; and if these are found to be insufficient to afford an agreeable and natural perception (not an enlarged or magnified image of the letters of a book, &c., held in the hand at the distance of twelve or fourteen inches from the eye), then apply those of the next power, viz., forty-eight inches' focus. If these again are unequal to supply the loss of power or incapacity of the eye to converge the light to a point at the instant it reaches the retina, then lenses of thirty-six inches focus are to be had recourse to; and when these fail to afford agreeable vision, thirty, twenty-eight, twenty-four, twenty, must be progressively adopted, thus gradually descending the scale until the eyes receive such compensation for their progressive decay and loss of power, as spectacles carefully suited to the sight are capable so effectually to supply.

The period at which the sight begins to fail does not at all depend on age, but varies in different persons according to the formation of the eyes, the treatment they have received, and the constitutional capability; therefore, the age of the person requiring spectacles gives but a vague general idea to the optician as to what is required, unless other particulars are stated; such as whether glasses have been used before; the distance at which writing and printing is seen pleasantly without assistance, the focus of those last used, or sending even but a broken piece of the same.

“The proper selection of spectacles for imperfect vision is a point of much deeper importance than is generally believed. An *oculist* who is only acquainted

with the diseases of the human eye, without possessing any knowledge of it as an optical instrument, is often led professionally to recommend glasses when they ought not to be used, or to fix on focal lengths entirely unfit for the purpose to which they are applied, and the *mere vender* of spectacles and lenses is still more frequently in the habit of proffering such counsel.”—
BREWSTER.

The near-sighted, or those who require concave spectacles should use those of the slightest power; No. 0, or No. 1, will generally be sufficient at first, but this, by the aid of the trial box, can readily be determined by the wearer himself. There is such an immense benefit experienced by the short-sighted from spectacles which suit their sight, that to argue for their adoption of them would be quite superfluous. Without spectacles they are excluded from observing beautiful landscapes, recognizing individuals, or viewing to advantage any of the crowd of interesting objects around them; but by adopting them they are placed on a par with the long-sighted in such circumstances, while the sharp and microscopic character of their sight *without* spectacles, gives them many advantages over those possessing ordinary vision.

The short, or near-sighted eyes, have the cornea, and often the crystalline lens, more convex or arched out than in long-sighted eyes. This formation causes the rays to converge to a focus before they reach the retina, but by the application of a concave lens the difficulty is corrected, and the rays are carried on to their proper point for giving a perfect representation on the retina.

This character of sight is very frequent, and is more

particularly remarkable among those whose mode of life restricts them to crowded cities, sedentary employments, and confined situations. Those whose infantine and youthful years have been passed in the country, or where the eyes have had a free range of view, not circumscribed by the walls of the nursery, or limited to the observation of objects near at hand, rarely require concave spectacles.*

The spectacle-frames next demand our attention, as our utmost care in judiciously selecting lenses of the proper focus for our sight will be neutralized if the frame or mounting in which they are placed does not apply comfortably to the head, leaving the lenses they carry fair and parallel before the eyes. If the front of a pair of spectacles is too short for the wearer's face, he will look upon the edge of the lens, and a portion of the exterior rim of the frame; if they are too long his eye will meet the opposite edge and inner curve of the rim.

Spectacle-frames are fashioned to suit the variety of formation in different individuals, and therefore such should be applied as adapt themselves pleasantly to the

* In Russia the person having short sight is seated in a chair for several hours daily, with the head placed in a natural position for reading, but prevented from pressing forward. The page is at first placed at the short distance at which the eyes have been accustomed to observe; but this distance is gradually extended, until the humours of the eyes, constantly exercised in endeavouring to accommodate their powers to the gently increased demand upon them, at length acquire the capability of observing at the usual distance.

It is undoubtedly the fact that this character of sight may be acquired; many instances could be adduced of watchmakers and others, whose employments are of a sedentary or studious character, becoming short-sighted.

temples, across the forehead and before the eyes. The pupil of the eye should, when looking at an object directly before it, see through the centre of the spectacle-eye, so that if the whole of the glass, except the small centre, were painted black, the rays of light would pass through it without distortion of the pupil. The bridge or nose-part of the spectacle-frame should be arched out, made like the crank of a lathe, or perfectly parallel with the knuckles of the sides, according to the formation of the wearer's nose, otherwise the spectacles sit awkwardly on the face too far from or too near to the eye-lashes, with their centres too high or too low for the natural exercise of sight. Trifling as these particulars may seem, they cannot be neglected with impunity. Where these defects are unattended to, the eye is tortured by straining to overcome the difficulty, and striving to accommodate itself to them, instead of their being shaped to meet its requirements. Some old-fashioned spectacles have short side-pieces, which press most unpleasantly on one point of the temples, and when closed scratch and rub the lenses. Others have very cumbrous and heavy sides, with double lift or common hinge-joints. These also scratch the lenses when folded up, and can only be worn with any degree of comfort when the head is uncovered. Decidedly the best constructed spectacle-frames are those which, without being clumsy, have enough strength to admit of the sides being extended the full width of the face without bending the front, with single sides rather longer than their front for ladies' use, and with turnpin sides (an extending joint, turning on a pivot,) for gentlemen.

The material of which they are composed should be

either gold, silver, or enamelled blue steel. Tortoiseshell, also, when well made, is very light and pleasant to wear, particularly for ladies. There is no advantage in large size, or round-eye spectacles, to compensate for their clumsy appearance and great weight; we get a sufficient expanse of observation with the oval-shape glasses without harassing the eye with an excess of light, which the large glasses admit.

Solid blue steel mountings are a decided improvement, and are invaluable for persons who constantly require spectacles. They are wrought from a plate of steel, and shaped as light and uniform as any other town-made elastic blue-steel spectacles, with the advantage of being more durable, and eventually less expensive; for as they have no soldering in their composition, it is scarcely possible to break them, and therefore they rarely want repairing. Blue steel spectacles, in consequence of their being so much in request, are coarsely imitated, and vast numbers are sold by the pretended cheap shops, at apparently low prices which the wearer will find to be immensely beyond their real value. There are thirteen different qualities of the spectacles termed blue steel. The chief part are country made, and roughly put together, some being all iron, others having iron fronts and steel sides; others again bear a tolerably close resemblance to the best town-made articles, and unless the two are compared together, are likely to deceive a casual observer.*

* It will be perceived that it is the workmanship and nice finish of the best town-made spectacle-frames which necessarily increases the price. Thus, a single pound of pig iron, which costs one penny, can be manufactured into watch-springs of the value of £240.

The fine elastic blue steel, of the best quality, are exceedingly light, highly polished, and beautifully enamelled. They will retain their appearance for two or three years, when carefully used; and they can be restored to their original appearance at any time for a few shillings' expense.

The anti-pressure spectacles are made of gold, silver, or the elastic steel. They are not adapted for ladies' use, but for gentlemen have been much in demand, as they obviate the necessity of opening and closing a second joint or lengthening piece, and do not press or annoy the nose or temples, but by an equal tenacity preserve their proper position before the eyes.

Single eye-glasses, though very convenient for occasional use, are not to be compared with spectacles for the agreeable and natural assistance they give to vision. The eye should not be dependent on them for continuous assistance. Those who persist in using them should do so as little as possible; but the wiser course is to discard them entirely, and adopt the double eye-glasses where it would be tedious to apply spectacles of the usual kind.

That the vision is more natural and perfect when both eyes are employed than when one glass only is used, must be self-evident, as the axis of each glass, placed as they should be in the spectacles, coincides with the axis of each eye, and the rays of light are thus equally refracted to the eye. Again, the eyes have a most acute and sensitive sympathy with each other, and when a single eye-glass is constantly used they are unnaturally exercised, and prevented from acting in concert. One eye (generally the right eye) has the glass perpetually applied to it; and very frequently, in consequence of

this pernicious practice, becomes of a different focus to the other. Mr. George Adams informs us that he did not recollect an instance of a short-sighted person who had occasion to increase the focus of his concaves if he began by wearing spectacles, but that the cases were frequent, where a single eye-glass had been used, in which the persons had frequently required a change of glasses.

The prices of spectacles are diversified and fluctuating, like all other manufactures, so that to publish a list of prices would only tend to mislead and deceive my readers. For instance, the price of a pair of pebbles, used formerly to be one guinea extra to the charge for glasses; they are now reduced to half that sum. A pair of pebbles, of the concave or of the periscopic figure, were at the same time charged twenty-five shillings. These have been reduced in the same proportion. And it cannot be too universally known, that a person can have a pair of good convex glasses fitted into his spectacles, and correctly suited to his sight, at from one shilling and sixpence to two shillings per pair, by any respectable optician. The poorest person may be defended against the tender mercies of the spectacle speculators; for he really can obtain a better article for his money, both in quality and suitableness to his sight, of the respectable optician, and, upon an average, at *a less cost* than the cheat contrives, by dint of manœuvring, to extract from him. Good lenses, in plain frames, or, in other words, a good pair of spectacles, may be had, correctly suited to the sight, for two shillings and sixpence. Who then, knowing this, would suffer his sight to be tampered with? Truly, those who would

stickle for a shilling in the price of such valuable and essential instruments

“Deserve not the comfort they shed o’er the soul.”

Yet, at the same time, there is no reason why those exorbitant charges should be submitted to, which are often paid without hesitation by the delighted purchaser, when a pair of spectacles appears to suit his sight.

The love of the marvellous, and the insane thirst for novelties, are strikingly displayed in many inquirers for spectacles. The honest, straight-forward, and disinterested counsel of the established tradesman, is looked upon with scowling suspicion; but the preposterous and shallow pretensions of the empiric, decked with all the paraphernalia of fudge and falsehood, are listened to with eager curiosity. If the writer looked to self-interest as his guiding star, his course would be to preserve silence on these subjects; since it needs not to be demonstrated, that the practice and the profit of the regular practitioner are increased by the patched-up and mangled cases, which are, as it were, provided for him, over and above the number who *legitimately require* the exercise of his skill. But he despises such mercenary calculations, and contends that “The happiness of mankind at large is a principle that ought to be followed out by all individuals at every personal cost, and against every kind of opposition.”—*Medical Examiner*.

CHAPTER IV.

“ Allured by hope of plunder, and intent
By force to rob, by fraud to circumvent,”—ÆNEIS.

I SHALL give a few instances of the manner in which advertising adventurers rack their ingenuity to dress up their announcements in the most catching and attractive style ; and, failing to find language sufficiently striking and pointed to arrest attention, scruple not to manufacture terms and apply similies, which, however preposterous and absurd they are seen to be when examined, yet answer their purpose of mystifying the public, and inducing a purchase of the vaunted articles.

We have only to glance at the columns of our newspapers, and the covers of periodical publications, for illustrations of the extent to which the system of scheming, falsehood, and trickery, termed puffing, is carried. In one specious and lofty-toned announcement we are told that the most splendid discovery of the present age is now admitted, by the most unquestionable (?) testimonials, to be “ Grindstone Snuff,” which is warranted to cure gutta serena, cataract, and all other diseases of the eyes, while a single pinch scares away headache and nervousness ! Another startles the weatherwise by his impudent pretension to be the *only* maker of barometers and thermometers in London ; whereas, if the real truth

were disclosed, it would be found that his connexion with the trade consisted in some such occupation as engraving the index plates of the instrument for his employers, who surely have the greater right to be considered real makers. Balsams, cough drops, rheumatism and gout dispersers, pills, cerates, syrups, shaving soaps, corn-plasters, and heal-alls—all boast of the wondrous cures effected, and testimonials received. The long list of essences and decoctions, from vinegar to honey, also have the names of distinguished gentlemen of the faculty, the royal family, nobility, clergy, and gentry, appended as bearing testimony to their surprising virtues. “Highgate’s universal irresistible Ointment” we are informed, is an invaluable specific for all disorders.

“But who shall decide when doctors disagree?”

A counter address denounces the same individual as an *uncertificated impostor*, who has no testimonials of his own, but has filched extracts from the only real original certificates and testimonials of “Monsieur Holabolo’s genuine Panacea,” which alone is a radical cure for all internal and external complaints. Another ointment puffer, whose nostrum is warranted to cure the plague and cholera, among other evils, occupies two columns of a newspaper with cures said to be effected by it; and these are flanked with no less than seventy-six names of surgeons and oculists, who, among others, testify to its monstrous virtues !!*

* As for operators on the teeth, they have multiplied exceedingly in the land. Their successful career is a *biting* satire on the credulity of their supporters.

American Quackery.—The cost for advertising quack medicines in the United States, annually, is estimated at 200,000 dollars. A

Now in all these quack advertisements, we find the names, titles, and residences of the professional gentlemen correctly given, which possibly may be of some consideration. Indeed, I know it is to some few an advantage not to be overlooked, as their names are thus kept before the public eye free of expense to them, and they are, although indirectly, as effectually puffed into notice as the quack himself. Without charging the respectable and high-minded members of the profession with entering into a compact, and designedly lending the sanction of their name and office to these abominable schemes of imposition, and granting full force to the apologies they offer as to its “being customary ;” “that the profession generally do it ;” “that to interfere would be expensive and troublesome ;” and that “it is the fault of the public, who suffer themselves to be deluded by such shallow artifices,” I conceive it to be the bounden duty of every man of honour, when those tricksters employ his name without his sanction or authority, to adopt measures to disabuse that very large section of society, who attach full credit to statements appearing under such auspices.

But it is with spectacle advertisers that we are more immediately concerned, and it is therefore essential to convince every individual of ordinary capacity, that he can, by the exercise of common sense, and the moderate

peck of pills per day is considered necessary for Boston, and half a bushel for New York. On an average, only one in twenty-five who take them is actually sick ; and the proportion of those dispensing with some necessary of life to purchase nostrums, which do them a positive injury, is in the ratio of eighty-seven to every one hundred throughout the country.

use of his reasoning faculties, safely and judiciously determine for himself, when spectacles are required, and what powers and qualities they should possess; either when the eyes first require restorative aid, or at any subsequent period of life.

Amber spectacles have been bepraised and forced into notice as much as any of these quack specifics. I consider that the apathy and indifference manifested by those who know the statements put forth to be a tissue of falsehoods, are extremely reprehensible. No wonder that thousands have been tricked and trifled with when such novel and plausible pretensions have remained unchallenged, and those who know them to be hollow and deceitful artifices have suffered them to remain unexposed. Amber is so soft that a proper degree of polish cannot be given to it to make it suitable for spectacles. The streaks, specks, veins, and irregularities in it may be detected by the most casual observer. Glass and pebbles assimilate closely to the composition of the eye itself, but amber only imitates its diseased and decayed appearance. When the powers of the eye begin to decline, the crystalline humour becomes somewhat yellow, and as the decay proceeds this tinge increases.* Amber is strongly charged with electricity;

* Dr. Petit found the crystalline in the eye of a man eighty years of age so yellow as to resemble amber.

“When exposed to heat it becomes soft, swells, bubbles up, is apt to take fire, and burns with a yellowish flame.”—*Heron's Chemistry*.

“It gives out electricity by friction. It is an indurated vegetable juice, and not produced by the laws of crystallization, but by the same causes which influence the mechanical condition of gum

it has an affinity for oil, grease, and human perspiration ; “ and it was from amber that the electrical fluid was first obtained.”*

Since writing the above, I have received, by the medium of the twopenny post, a printed circular, headed, “ *Amber Spectacles*.—M——having experienced from the use of amber spectacles that which is expressed by the following eminent gentlemen, considers it to be his duty to caution the public against the use of them :— “ Amber is a soft substance, and it is impossible to form it into a perfect lens, and a lens improperly constructed would prove most injurious to vision. Amber, in a moderate heat, becomes sticky ; and by cleaning it in a short time, the polish wears off. It is also easily scratched, and soon loses the little transparency it possesses, Glue, as to substance and colour, is quite equal to it ; and although purchasers pay an enormous price for amber spectacles, yet they incur a great risk of materially injuring their vision.”†

If there even were any merit or superiority in amber spectacles, be it observed, that the persons who prate about *their* discovery, are not the parties who originated or introduced the article. I have in my possession several which were first brought to this country, and

arabic, and other resinous substances. Insects are often found embedded in it.”—*Parkes's Chemistry*.

It is a fact, that to silence such objections, a great improvement in amber, very pure and costly, was announced ; this was nothing more nor less than yellow plate-glass, the same as is used in stained-glass windows. I have several specimens of these “ superlative patent amber” in my possession.

* Dr. Neill Arnott.

† Dollond—Curtis.

sold by a Prussian mechanic, long before he came in contact with individuals, who took a shameful advantage of his forlorn situation, and, after deluding him with specious promises, reduced him to their own terms. The poor man found remonstrances to be unavailing; and as he knew that redress was both uncertain and expensive, he refrained from farther interference, sighing as he said,—

“My poverty and not my will consents.”

Cautions respecting amber spectacles have frequently appeared in the daily newspapers. On the 17th of APRIL, 1838, the “*Sun*” contained a long advertisement, lauding their extraordinary virtues. In the same page, followed an exposé of the puff; and in another part of the paper was the following paragraph, made to appear as the editor’s remarks :—

“An advertisement appeared in our paper of the 9th instant, calling into question the merits of patent amber spectacles, which have been so highly recommended for the preservative and assisting qualities for defective vision, by men of high character and professional reputation. The names of Messrs. Dollond and Curtis being used, it is right that the public should be apprised of the ascertained fact, that it owes its insertion, not to the knowledge of those gentlemen, but to the personal pique of interested individuals.”

Persons who are somewhat acquainted with the manner in which such paragraphs are got up, well know what importance is to be attached to them; the uninitiated, however, are led to suppose that Messrs. Dollond and Curtis were not of the opinions expressed, but that some of the trade, jealous of the advertisers’ “high character,”

had maliciously questioned the “superior refractive property,” “light modifying,” “cool,” and “soothing” attributes of the admirable amber. But what ought we to think of the professional and literary characters who countenance the system of fraud and delusion practised by puffing advertisers. We might in charity suppose that the signatures of those eminent persons were surreptitiously obtained; and in that case, the straight-forward course they ought to adopt, should be publicly to disavow all connection with the cheats. But if they really hold the opinions attributed to them, we are bound to declare that, opposed as such idle notions are to truth and common sense, their presumption is ridiculous in publishing opinions on a subject of which they are grossly ignorant—ay, grossly ignorant! however capable and popular they may be in their own professions. Indeed many names of able and skilful surgeons are enumerated in the list of patrons and testimonial writers, who would smile at the effrontery of self-dubbed opticians, and the credulity of the public, conscious that they had no pretensions to any superior acquaintance with the subject. The ingenious and talented Dr. Neill Arnott remarks, in his “Elements of Physics,”—“Will it be believed that *there are medical men* who neither understand mechanics nor hydraulics, nor pneumatics, nor optics, nor acoustics, beyond the merest routine; and that systems of medical education are put forth at this day, which do not even mention the department of physics or natural philosophy;”

But a general diffusion of knowledge is changing the condition of society, and elevating the human character.

At first we almost tremble at our own boldness, in demanding proofs of the capability of our teachers ; but the mind, gathering power, and unfolding its strength, with every opportunity for its manifestation, insists on having positive proofs, rather than vague pretensions, and demands solid information, instead of empty nothingness, however gorgeously arrayed, or pompously introduced.

CHAPTER V.

“ Nothing extenuate or set down aught in malice.”—SHAKSPEARE.

SOME instances which have come under my own cognizance will illustrate the way in which gross imposition is practised, and the public morals materially injured, by weakening confidence in those who are, from their education and rank, looked to as guides and preceptors, and causing the mind to turn with indignation from the needy, but debased and grovelling creatures, who resort to any means, however infamous, to effect their selfish purposes.

A military gentleman, of Stonehouse, was waited upon by a renowned optical quack, who, the moment he entered the parlour, exclaimed, “ Goot Got, Sar ! vy, you are a’goin plind ; the sight is leaving your left eye ! If you don’t immejartly take to my improved classes I vill not answer for the konserkences ; kataract will grow on it in a month ! ” The gentleman, taken by surprise, tried on some of the *preservers*, and finally purchased two pairs of hand-folding spectacles, for which

he paid four pounds. Some time after, they were more particularly inspected, and proved to be common glass, instead of pebbles, as was represented, and of much stronger focus than the eyes required. The full London retail charge for *such* articles is 10s. per pair.

In the same town the same *distinguished* individual forced his way into the study of a reverend gentleman, and alarmed him by a similar prognostication. A pair of the “clarified crystals, ground by a peculiar process,” were purchased, price fifteen shillings. Afterwards, upon finding that one eye was irritated, and derived no assistance from the spectacles, the gentleman called upon the optician who had always previously supplied him, and was convinced of the trick which had been put upon him. They were common machine-worked glasses, each of a different focus, and neither of them suitable to his sight. Their proper price, sold in their proper place (*viz.*, by hawkers, in the streets,) is one shilling per pair!

A gentleman of Norwich, struck with the advantages promised by some extraordinary spectacles, paid two guineas for a pair of blue steel, with blue glasses, which were warranted pebbles,* and had the additional vexation to be severely censured by several friends, who complained that the fellow had fixed them with similar trash by representing that he (the gentleman) had said, “After you leave mine, do you go down past the Norfolk Hotel, and say I bid you to call on Mr. and Mrs. —, to sell them spectacles such as I have bought.” This, of course, was a manœuvre of the cheat himself.

* Pebbles, it is scarcely necessary to say, are colourless.

A gentleman, of Tavistock, purchased a pair of silver spectacles, declared to be very fine pebbles, price thirty-five shillings; they were merely glass; and as he required a glass in an old pair of spectacles, the pompous hawker offered to *oblige* him by putting one of his “clarified lenses” to match the focus: for this he charged five shillings and sixpence. It was two inches different in focal length to the original glass! which would have been properly matched, by any resident optician, for one shilling!

One of the hawking tribe called at the residence of Major C——, near Hereford, and represented that M——, Esq., had ordered, on the previous day, two pairs of spectacles, and desired him to call upon his friend, the major, to suit him also. In this case the attack was parried; and, spite of the hawker’s vehement declaration, that the eyes were in a terrible state, he was dismissed, “to call again to-morrow.” Thus the major preserved his eyes, and saved his money. In the evening he saw his friend, and inquired if he had sent a fellow to his house with spectacles? “No,” was the reply, “but you sent him to *me*; for he came this afternoon, saying you had bought two pairs, and wished me to have some of the same kind; therefore, I bought two pairs, and paid him the price he said *you* gave, viz., three pounds, ten shillings, though at first he wanted four guineas!”

A naval captain, residing at Monmouth, showed me a pair of silver spectacles with six-inch focus glasses, very jagged and splintered at the edges, worth at most twelve shillings, for which he had given one of the tribe of im-

postors two guineas, and a pair of tortoiseshell (which *did* suit his sight) into the bargain.*

A lady at Belfast was attracted by the showy advertisement of an itinerant optician, and called upon him, "between the hours of ten and six," for the purpose of purchasing a pair of spectacles. The first thing he did, after staring at her, and impudently declaring that her eyes were being ruined, was to snatch her spectacles from her face, and put a pair of his own in their place. "There, Matam! they are the spattacles for your eyes, those you have been veering vill pring on kataract." "I see pretty well in these," said the lady, "but my own suit about as well, I think." "Oh dear no, it's quite a mistake, your own are retched; put them on—isn't there a differench now, Matam?" "Yes, there is," said the lady, (who had too much penetration for the pedlar) "they require cleaning after having been held in your hot hand all this time;" and taking up a wash-

* This gentleman stormed most lustily when made aware of the trick which had been practised upon him, and threatened legal exposure to the "professional optician." But this course is seldom resorted to, the dupes recollecting that, while they publish the swindler's villainy, they give us but an indifferent idea of their own discernment, beside the uncertainty and incongruity ever attendant upon Law, thus quaintly sketched by Bentham;—"If a man give you a black eye, you make him pay for it, but if he put your eye out, you get nothing; and whatever is taken from him goes nominally to the queen—really to John Stokes or Jack Nokes who have no concern at all in the matter. If a man kill your pig, you get the value of it, but if he kill your wife or your child, you get nothing—if any thing is got out of him it goes to a stranger, as before. A man sets your house on fire, if by misfortune, you receive amends, if through malice, you receive nothing."

leather she wiped the glasses, and, replacing them, bade adieu to the *testimonialed* optician.

A lady, who was visiting for a few weeks at Margate, was startled one morning, by a big, blustering, shewily-dressed man, who, after knocking at the street door, pushed past the servant, and rapping loudly at the parlour door opened it without waiting for any reply. “Goot morning, Matam, I am the optician to the royal family; your friend, Lady W——, terives so much goot from my pellucit lenses, she peggd me to call and suit you.” Before all this had been uttered he had taken a package from a confederate, dressed as a livery servant, who accompanied him, and covered the table with his stock. “Your eyes are in a most alarming state Matam, this pair of cold spattacles will suit you.” “Really,” said the lady; “how came Lady W—— to suppose I wanted spectacles? I have never worn any at any time in my life.” “No, that’s the vary reason your sight is leaving you; your eyes are vary pad.” “What is the price of this pair?” inquired the lady. “Three guineas” was the answer. The price was paid; and after punishing her eyes for a few days, the lady met with a scientific friend who convinced her that they were totally unfit and improper for her, her eyes being in excellent order, and not requiring spectacles at all!

A gentleman, visiting at Canterbury, in 1834, was induced through the representations of the same notorious cheat to purchase a pair of spectacles, which were warranted to dissipate the cataract forming in his eye; the price paid was five pounds. As he was lamenting the terrible state in which he was informed his eyes certainly were (although, strange to say, he was quite unconscious

of it) another pair was placed upon his nose, which, he was told he ought to wear as a change, in case the eyes were pained by the efforts of the first pair to dissipate the cataract. Another five pound note was handed over to the hawker, who began to grow quite pathetic; and artfully alluding to the services of the gentleman during the war, and expatiating upon a few circumstances with which he had made himself acquainted in a chat with one of the gossips at the public house where he lodged, he pretended to lament the necessity for the gentleman staying within doors. "What, may I not take a walk or ride as usual? I can't endure being cooped up within doors," "There's danger in your going out," said the pedlar, "except your eyes are guarded with green Refractive Preservers." "Oh, bless me," said the gentleman, "that's very serious; then you really think I ought to have another pair for walking and riding, eh?" "Oh certainly, by all means; nothing else can save your eyes, unless you confine yourself within doors." "What's the price of such a pair of preservers?" "Six guineas, Sir; but as you have bought the others you shall have them for five pounds." "Why, dear me, I shall be ruined in buying spectacles, and yet I never felt that I wanted them before." "That's just the way, ven the eyes are a'going blind it comes on all at once, my tear Sir."

By this transaction the pedlar actually pocketed three five pound notes. In less than a week afterwards the first two pair were sent to me to have the yellow coloured glasses exchanged for white lenses of four degrees less magnifying power; the price at which the whole three pairs could have been purchased elsewhere would be forty-five shillings.

It will scarcely be credited that the individuals who thus practise on the public are grossly ignorant; and were it not that the anxiety of the purchasers to possess something extraordinary renders them liable to imposition and allays suspicion, such shallow pretensions never would pass undetected.

One of the tribe, who, until lately, practised the art and mystery of his forefathers as a dealer in old clothes, suddenly changed his *profession*, and, calculating the chances to be two to one in his favour, ventured, neck or nothing, to blazon himself forth as an experienced, scientific, and practical optician. A book, bearing his name as its author, and sundry special appointments, obtained by dint of the most brazen assurance and persevering importunity, were ostentatiously paraded before the wondering eyes of her majesty's liege subjects. The public are stultified, and the eminent individual himself, is almost astonished that the scheme should take, and like the "Fly preserved in amber, wonders how the d—— he came there."

There are artists in his locality who can give many *graphic* illustrations of the disregard to truth, violation of friendship, and cunning perversion of facts, of which this individual has been guilty, and yet no one has a greater array of eminent names and testimonials to show—many signatures of really clever men having been obtained by some means or other. Surely there is much piquancy and truth in the Spanish proverb: "those who know most are oftenest cheated."

CHAPTER VI.

“ See, arm’d with great authority, they come,
 And with great names and numbers strike us dumb ;
 Reason and common sense to names must fall,
 And strength of argument ’s no strength at all.”—DODSLEY.

I WILL now produce a few specimens of Puffing Advertisements, which will show how sounding words are senselessly strung together to give an air of importance to their originators, and leave my readers to judge for themselves how far the public ought to be influenced by them. The orthography (?) of these puffs is, in every way worthy of the authors of them. They are given *pure*.

PUFF, No. 1.

Improved Eye Preservers, patronized by the Faculty of the Eye
 Infirmarys for Cataract, and other improved glasses.

Mr.— optician to the Queen,* Her Royal Highness the Duchess of Kent, &c. sole Inventor of Optical Glasses, ground and shaded on the Exact* Principle. Mr.— has been for twenty-five years a manufacturer, who has devoted his study with time to bring this branch to perfection. Mr.— has been earnestly solicited to pay a short visit for a limited period. He has the honour to announce his arrival from the London, Bristol, and Edinburgh Optical Establishments.

* The royal arms appear at the head of this elegant announcement. (Query) Ought not the proper authorities to prohibit such vile use being made of the name of royalty.

† Query—*Exaction* principle.

Spectacles for far and near distances, for those who have a full eye, ground in a peculiar manner.

Sight is often abused by inexperienced persons taking upon themselves the impracticable task of assisting it.

The Improved Spectacles, and other glasses, made by Mr.—— on the authority of professional gentlemen, are the very best ever invented; they have gone through a different process, which clarifies and makes them the greatest improvement ever heard of by candle light or dull day.

Mr. —— can tell by the physiology and figure of the eye when to give the greatest assistance. His glasses are of a refractive quality; so constructed as to effect the greatest relief; manufactured by machinery of a new construction, and by a peculiar way. Turbid glasses destroy the cornea and iris of the eye, and harbingers all ocular diseases.

* * A book will be given for the use of the Improved Spectacles and advice for all diseases.

Sight is injured by buying Spectacles of Shops, or other *chance* places of sale, totally unacquainted with vision.

Ladies and Gentlemen whose eyes are weak will, by using these extraordinary Spectacles for two or three hours a week, find their matchless qualities, as they are ground in a peculiar way.

Mr. —— will call with a large Assortment.

LICENSED HAWKER, NO. ——

* * This Circular will be called for.

PUFF, No. 2.

The sight of the aged assisted by the Improved Spectacles, upon unerring principles.

Persons have been going round copying Mr. ——'s Bill, who is the only real original manufacturer of them? * it has been the cause of many persons nearly losing their sight, Mr. —— has had fifteen years practice on the eye: there is such a monstrous difference in

* Were those individuals really *manufacturers*, they would not require a Licence to vend their articles. See Act of Parliament, 50 Geo. III. cap. 41, sec. 23. enacts: " Provided always, and it

these improved glasses, that one pair will serve a person his whole life. The sight of the aged assisted, the weak strengthened, and the perfect improved, by Mr. ——'s improved spectacles.

Spectacles for those who have a full eye ; the glasses are ground in a peculiar manner. Blindness has took place from the ignorance of persons wearing the glasses in common use, owing to the glasses *drawing* the eyes. These glasses are highly recommended by professional gentlemen, who view them to be the greatest improvement ever known ; they have gone through a different process, which clarifies them, and makes them the greatest improvement by candle light or dull day, qualifying you to see the greatest length of time at one sitting ; those persons whose eyes are weak, by using a pair of those extraordinary preservers for two or three hours will find they are ground in a peculiar manner.

A treatise will be given for the use of the Improved glasses, with advice gratis for all diseases of the eye. Mr.—— flatters himself he can perform the most difficult cures in the sight with the greatest ease ; there is no complaint of the eye but he is acquainted with. Mr.—— cautions the public against a person who is selling Spectacles which pretend to be his.

Mr.—— will call with a large Assortment of Improved glasses, which will give satisfaction.

LICENSED HAWKER.

is hereby enacted, that nothing in this Act shall extend to prohibit any person or persons from selling any printed papers, licensed by authority, or any fish, fruit, or victuals ; nor to hinder the *real worker or workers, or maker or makers* of any goods, wares, or manufactures of Great Britain, or his, her, or their children, apprentices, or known agents or servants usually residing with such real workers or makers only, from carrying abroad or exposing to sale, and selling by retail or otherwise, any of the said goods, wares, or manufactures of his, her, or their own making in any mart, market, or fair, and in every city, borough, town corporate, and market town. Nor any tinkers, coopers, glaziers, plumbers, harness makers, or other persons usually trading in mending kettles, tubs, household goods, or harness whatsoever, from going about and carrying with him, or them, proper materials for mending the same."

PUFF, No. 3.

Caution against a person taking the name of Messrs. —, the professional opticians : and imposing upon ladies and gentlemen in selling shameful spectacles, as Messrs. — improved, and charging forty shillings, while Messrs. — only charges for the same twenty shillings, or, with pebbles, only fifteen shillings.

PERMANENT RELIEF

for all disorders effecting the eyes, and cases of dimness. Were it necessary,

A HOST OF CASES

might be named by which persons, distinguished, have, by their improved scientific and successful using of their

IMPROVED GLASSES

been much benefitted. The honourable patronage noticed at the head of this article, and their hourly increasing patronage, are proofs of their great skill and talent for

ALL DISORDERS OF THE SIGHT.

They have the honour to be professionally consulted by the chief families in the empire. Imperfect sight can only be handled properly by those who by deep study have a talent for

THE ORGANS OF SIGHT.

Many people injure their sight by buying improper spectacles, whereas it is

THE ESPECIAL OBJECT

of Messrs. — to rest the claim of patronage on those numerous persons of the first quality.

THE NOBILITY AND GENTRY

May be suited with Spherical Pellucid Glasses, of every class, according to their exalted rank.

THE MERCANTILE AND LABOURING CLASSES

may have their daily toil sweetened by these improved glasses ; administered, in cases of distress, on terms accommodating to their situations in society.

LICENSED HAWKER, No.—, A.

PUFF, No. 4.

For a short time only.

Mr. —, Optician to their Royal Highnesses the Prince and Princess of —, King and Queen of —, has the honour to inform the nobility and visitors of —, he has arrived from the London Royal Eye Infirmary, for a short time only, A reference to the distinguished patronage he boasts, will convince the public he possesses great skill in the Optic Line, and is without a parallel when such organs as the eyes is liable to evils from common glass and pebbles, one being no better than the other ! It is his imperative wish to guard the public against them ; therefore, he announces his stay will be for a short period.

LICENSED HAWKER, No. —, B.

PUFF, No. 5.

MAY BE CONSULTED,

Mynheer —, Practical and Professional Optician, Surgeon-Oculist and Surgeon-Dentist, announces his arrival. In all recent or chronic weakness, a perfect cure is his far-famed Keysell Spectacles, which have the density and translucency of a diamond, and refractive preserving powers, being composed from rare crystals, produced from the Carpathian Rocks, so highly recommended by the faculty. Mynheer M — being based upon the greatest perfection which the dento-chirurgical art can be carried, can renovate all decay by his succedaneum, which all the faculty of the continental cities recommend. In two seconds it removes pain, and lasts many years.

But it is to the Keysell Spectacles and Terrence Teeth that he would *draw the eyes* of his friends to : they are fixed in the mouth so that it is impossible to remove them without wires. They increase the beauty by their elegant matchlessness.

LICENSED HAWKER, No. —

PUFF, No. 6.

POSITIVELY FOR THIS WEEK ONLY.

Messrs. — have succeeded, after fifteen years' professional practice, and devoting their whole lives to the optic line, in bringing out a wonderful translucency for the organs of sight, coupled with a conductor for deafness. This wonderful discovery brings faulty hearing to perfection. They are so arranged and combined with scientific principles, with the long practice of the inventors, that they will allow such an extent of relief that will quite astonish every beholder.

They are anxious not to be confounded. There are other people who pretend to the skill of Messrs. —, therefore the public are liable to be imposed upon. Inferior spectacles can be had of persons calling themselves opticians, but Messrs. — think it is scarcely necessary to state, that their improved Translucency for Spectacles, and Conductors for Deafness, are manufactured under their own eyes, upon spherical principles.

LICENSED HAWKERS, No. —

One of the Firm may be professionally consulted from 10 to 6.

PUFF, No. 7.

IMPORTANT DISCOVERY.

Mr. —, Professional Optician, patronized by the faculty of London, Brighton, Bath, Edinburgh, Glasgow, and Paris.

Spectacles ground and shaded on the exact principle of truth, by Mr. —, the celebrated Optician from the London Optical Establishment, established for a number of years.

Mr. —, in consequence of the flattering encouragement he received from the first families, he has established himself here for a short time. He has made the study of vision his own, and can remedy any organic defect, neglect, disease, or imperfection. Many individuals of rank and royalty acknowledge the immense improvement. Mr. — will send a treatise, explaining every thing in the line, to every house, and will attend himself with a splendid quantity of improved glasses.

As several persons travel through the country in his name, he begs the public to look at his patronage at the top of his circular.

He is the sole Inventor of the Improved glasses. They have gone through an elaborate process, they are therefore clarified and pellucid. They throw a clearer light, and more brilliant than any others.

. At home from 2 till 6.

LICENSED HAWKER, No. —

Please to observe the brass plate in the window.

How often, too, accompanying such advertisements as the preceding, do we find paragraphs, in the laudatory style, to some such effect as the following (see also page 44). It requires but little penetration to arrive at a conclusion as to who are the authors of them.

PUFF PARAGRAPH, No. 1.—We again call the attention of our readers to Mr. — and his valuable assortment of Spectacles. They are manufactured with extraordinary care, and constructed upon the strictest scientific principles. M. — has for a long period past devoted his attention exclusively to that important branch of optics—the human eye;—and the proficiency he has attained of the complicated structure of that noble organ has enabled him to adapt glasses to every degree of defective vision. But the highest panegyric which can be pronounced upon the skill of this artist, is the unprecedented number of applications which have been made to him.

Our readers will observe, that his stay is restricted to a few days.

PUFF PARAGRAPH, No. 2.—We have more than once had occasion to allude to the surreptitious conduct of individuals, who are eager to profit by the established reputation of our resident opticians, Messrs. —, who are about making arrangements for visiting all the neighbouring towns, making this place their permanent residence.*

* It is gratifying, however, to find that many editors of newspapers repudiate the iniquitous system, perceiving that

The “Messrs. ——,” the “resident,” the “distinguished,” decamped at the expiration of three weeks.

their readers might justly look upon them as participators in the fraud.

One of the puffing, *professional* licensed hawkers entered the office of the Reading newspaper, and with the authoritative air of an Alexander, desired that his announcement should appear in the front column, and the *usual* laudatory paragraph in another part of the paper. He was informed that his advertisement could be inserted, but that the proprietors had determined never to admit such insidious clap-trap notices, which, while they injured the resident tradesman, and were looked upon as the *bona fide* opinions of the editor, generally referred to matters of which he could not honestly express a favourable opinion. The pedlar stood aghast! “What,” said he, “not put in a paragraph? Why, I’d sooner pay for a good paragraph than care about the advertisement at all.”

His *professional* visit was of unusually short duration, finding it impossible to bribe the press to trumpet forth his praise.

CHAPTER VII.

“It is a strange thing to behold what gross errors and extreme absurdities men do commit for want of a friend to tell them of the same! The help of good counsel is that which setteth business straight.”—BACON.

I HAVE, for many years, visited nearly every town in the kingdom, on commercial pursuits, at intervals of six months; and wherever I have met with the brazen advertisers alluded to, I have issued public notices, and inserted counter-advertisements, to put my friends and the public on their guard against such egregious imposition. Such a step, spiritedly carried out, has uniformly proved successful, and the notable pretenders have decamped from Bath to Norwich, from Brighton to Carlisle, sometimes assuming other names, or changing the initial letters; as S. and E., who had been vapouring away at Norwich, suddenly flitted to Margate, and there announced themselves as C. and B., the celebrated opticians from the Royal Eye Infirmaries, &c. &c. For low cunning and unprincipled trickery, such adventurers as I have described, stand unrivalled. Upon several occasions they have echoed my cautions, and copied, word for word, remarks levelled at themselves; hoping thus to shield themselves from detection, and confuse the public in identifying them; as the pick-pocket, when

the hue and cry is raised of stop-thief, joins in the shout, in order to allay suspicion.

It is in the provincial towns that such persons are most successful; the game is seldom played in the metropolis with so much effect; and although some of the tribe have been lately launching forth dashing advertisements in the London papers, it is understood to be with the design of attracting country customers, and overwhelming their dupes with an idea of their *professional* importance, rather than with the expectation of effecting sales in London.

When they sally forth to “fleece the natives,” who would think of questioning the abilities of such renowned opticians, armed with testimonials, credentials, and certificates! so recommended by the newspapers, and patronized by such eminent practitioners?!!

The fair trader would defend himself at the same time that he unmasked imposture, and protected his customers, if, when his neighbourhood is infested by such mountebanks, he advertised the simple truth. He would assuredly find

“That those base slaves, ’ere yet the fight be done, pack up.”

A few extracts from the advertisements I have inserted in the London and provincial journals may be useful as specimens.

“Spectacle swindlers are now practising deceptions upon the public to an unparalleled extent! They are principally wandering tribes of licensed hawkers, who change their names, or shift their residences, as occasion requires; copy the language of honest men, and puff off, as their own inventions, the very articles, which, without a shade of difference, have been regularly made and sold for above two hundred years. To accomplish their designs of fleecing

the public, they resort to the most pompous and extravagant eulogiums on the peculiar virtues of their ‘Saxon Crystals!’ ‘Patent Preservers!’ ‘Tinted Amber!’ and ‘Light Refractors!’ ridiculous terms, which *they have* invented, and which, embellished with a long list of distinguished names, are calculated to entrap, and impose upon the uninitiated.

“Spectacle wearers, beware! those tricksters, with all their lofty pretensions, are ignorant quacks. Their charges for the trash they foist upon you, are beyond all precedent, enormous!

“The flagrant impositions daily practised on Spectacle wearers, by hawkers and ignorant pretenders, imperatively demand exposure. The boasting charlatans are certainly indebted to the silence of practical opticians for their successful career, since persons requiring optical aid eagerly listen to whoever promises most. To those who have been victimized not another word is necessary to direct their choice, but experience calls on all who need optical remedies to profit by advice, and procure such important scientific instruments only of the known working optician or his resident agent, and thereby insure every advantage—better quality, lower charges, a liberal trial, and an exchange if not approved of.”

“The patronage such individuals quote has never been bestowed, or has been surreptitiously obtained. Mr. C. has documents from celebrated oculists stating this fact most unequivocally, and authorizing him to give publicity thereto. He has the gratification of knowing that his efforts to expose such fraudulent delusions, to defend the fair trader, and to protect the public, have been properly appreciated by the reflecting and intelligent, who perceive the impropriety of countenancing persons who resort to falsehood, misrepresentation, and dishonest artifices; and allow the superior claim of the respectable resident shopkeeper, whose charges are fair, whose desire and interest it obviously must be to supply the article

which will suit and to make any exchange or alteration if required.

“ Beware of the tricksters who blazon forth their pretended discoveries, in terms which, however absurd and ridiculous, nevertheless catch the attention ; and combined with an array of great names, unbounded assurance, and various manœuvring devices, enable them to foist their worthless wares upon purchasers at the most exorbitant prices.

“ Such charlatans are the pests of science, and speculators on the credulity of society.

“ Mr. C. feels assured that his friends, and the public generally, will remark the necessity there is for some one, practically acquainted with the science of optics, to come forward and state the real facts of the case, at a time when bombast and chicanery, supported by the most shameless falsehoods, are put forth by itinerant hawkers and pedlars—the pretended discoverers of a superior method of constructing glasses for spectacles. He is anxious to expose such deceptions, and to protect the Spectacle wearer from the gross frauds and impositions continually practised in the sale of Spectacles at enormous prices, although made of the cheapest material, and in the most inferior manner.

“ Such Spectacles are productive of endless annoyance to the wearer ; and, instead of rendering any assistance are instruments of torture, producing the most serious consequences to the sight, owing to their imperfect construction and the misapplication of their powers to the purposes required.

“ Persons requiring Spectacles are earnestly recommended to seek advice and assistance from opticians or

their agents, of known respectability and experience, who are capable of judging what kind of lenses are necessary in each particular case: and to avoid those charlatans whose ignorance of optics is only equalled by their impudence, in obtruding themselves into houses, and alarming the occupiers by declaring that they perceive serious defects in their eyes, the formation of cataract, incipient blindness, &c., in order to give an exalted idea of the value of the remedies they offer.”

“T. H., Watch and Clock maker, agent to Cox, optician of London, begs to caution his friends against the impositions of itinerant hawkers, who boast of exalted patronage, wonderful discoveries, and superior skill in optics, professing to suit the sight by merely examining ‘the figure of the eye.’ Such individuals frequently enter into respectable houses, and terrify ladies and gentlemen by declaring that they perceive serious defects in their eyes, and, of course, that nothing can avert the evil but their wonderful Spectacles; sometimes pretending that their only motive in calling is from their wish to relieve mankind from the chances of losing their sight, and to enable them to see as well at fourscore years of age as at twenty, while their main object is to fill their pockets at the expense of those who have fallen into their snare.

“The fallacy of their statements may always be ascertained by the parties taking medical opinion of known value, and consulting a respectable optician.

“It cannot be too generally known that the best glass

lenses, constructed on the most accurate principles, suited to the purposes of vision, and worked by hand, can be had of all respectable opticians, at from one shilling and sixpence to three shillings per pair, shewing that there can be no occasion for persons, who require a change of glasses in their spectacles, to pay a guinea or thirty shillings, and give up their old pebbles or glasses into the bargain.

“ A trick was practised at Brighton, during the season of 1834, which shews that those certificated gentry do not hesitate at trifles.

“ Two Jews, licensed hawkers, inserted glowing advertisements in the Brighton newspapers, couched in their usual bombastic style, but naming *one gentleman* only as having taken up his residence at Brighton, and stating that he would wait upon the nobility and gentry with a splendid stock of his *wonderful* and *improved* Spectacles.

“ A man called at the houses of the gentry, made many sales at the usual swindling prices, and disarmed all suspicions by inviting the purchasers to call at his residence, and make any exchange they pleased. In some cases, where the price was objected to, or the parties were taken by surprise, not having suspected that they wanted Spectacles until this *experienced professional optician* told them they did, they were, notwithstanding imposed upon, ‘ for,’ said he, ‘ to prove that I am anxious to preserve your sight, which is rapidly leaving you, and cataract is growing in your eyes, these Spectacles, which are five pounds per pair, I will leave you at half-price, and you may pay me the balance at any time.’ This offer appeared so very liberal that it succeeded in several instances, and, it is scarcely necessary to say, left to the

hawker forty shillings profit, five pounds being only mentioned to get more easily the smaller sum.

“ But the most profitable part of the scheme is yet to be told. Those who purchased soon found that something was wrong—the patent preservers gave great uneasiness to the eyes, which, suffused with tears, seemed to grieve at the simplicity and credulity of their owners. The residence of Mr. —— was besieged with complaining purchasers, who, when their turn arrived, were ushered into the presence of the other of the partners, and as the person who had sold them the Spectacles promised to make any exchange they required, they asked for a pair which would suit their sight, or a return of the money paid. The man they now saw looked at them, and asked, ‘Am I the person who sold you the spectacles?’ ‘Why, no,’ was the reply, ‘I cannot say you were the gentleman, but he was uncommonly like you, and he told me he would exchange the Spectacles if they did not suit.’

“ ‘Then you had better find him and compel him to do so, for the trash he has sold you will destroy your eyes and ruin your sight. He is an impostor; I know nothing of him.’ ‘Bless me,’ said the disappointed purchaser, ‘what a scandalous shame! what would you advise me to do now, Sir?’

“ ‘Why, *my* Spectacles are produced after twenty years of deep study and research, and manufactured, under my own eyes, upon improved principles, yet I only ask fifty shillings per pair; but I am sorry for you and though those you have bought are vile rubbish, I will take them in exchange, and thirty-five shillings for my Patent Tinted Crystals, which are the only Spectacles proper

for the eyes.' Thus the reader will perceive a double imposition was effected. A., after performing his part in the scheme of deception, kept out of the way until B. had completed the fleecing of the nobility, gentry, and public, and in a few weeks the *resident* opticians were on their way to other places, chuckling at their success, and inventing fresh plans of operation."

Page after page has been pirated from the works of eminent authors, and palmed upon the public as their own composition; consequently, though the advice may be excellent, the parties from whom it appears to emanate are vile plagiarists, whose *practice* is quite uninfluenced thereby. When imposture disguises itself in such a plausible form the difficulty of detection is increased, therefore our best security against deception is to transact business with men of known reputation. The resident tradesman has a character for fair and honourable dealing to maintain. He can be appealed to if any exchange or alteration is requisite, and the spirit of fair competition, now abroad, is the best security against overcharge from him; while the itinerant vender and pompous advertiser has to repay himself for such forced and expensive means of getting custom by exacting great prices, pushing off coarse and inferior goods, and practising any dishonest trick rather than not effect a sale of his wares. It may be said, with great truth, "his articles are not cried up because they are things that ought to be desired, but they are desired because they are generally cried up."

The Liverpool Mercury of Friday, Sep. 15th, 1834, has some remarks on this subject, which, as they are important and appropriate to our purpose, I transcribe :—

“ We beg to caution our readers against the arts of all those who profess to supply the public with superior Spectacles ; we have been for many years connected with the business, and we can assure the public that the Spectacle glasses sold by the advertising eye quacks are precisely the same as those provided by any respectable optician, the only difference being in the price. The charlatan varies his charge according to the gullibility of his dupes ; sometimes he puts up with double the proper and regular price, but more frequently he exacts three or four times more than a regular and honest optician charges. We recollect a once famous optical quack, in London, who made a large fortune by cheating the public. He advertised *his* superior glasses, which he assured the public were all ground to the true parabolic curve by his own hand, and for each of these glasses he charged four shillings, whilst the working optician who lived a few doors from him, and who furnished him with all his glasses, could only get nine pence for the very article for which the puffing eye doctor charged four shillings. As we knew both the parties we pledge ourselves to the fact, and, in conclusion, we advise the public to have nothing to do with quacks, whether they be scientific quacks, who are plentiful enough, or other quacks, who swindle people out of their health and cash at the same time.”

CHAPTER VIII.

“Who will, for him, may boast of sense,
His better guard is impudence.”

IN the early part of the present year I addressed letters to several gentlemen who figure in the list of patrons to the advertising Spectacle quacks, and enclosed a copy of the advertisements in which their names had appeared as giving unqualified approval to the trickster's *invention*.

From the specimens I have given of such advertisements it is unnecessary to give a verbatim copy again here; and as the truths which this correspondence elicits apply to one and all of the puffing tribe, I have omitted the names of the individuals particularly alluded to, my object being to expose a *system* of villany, and not to denounce *one* or *two* rapacious creatures, while the rest of the clique escape detection.

Therefore, although many of the remarks in these pages may seem to have only a local or particular reference, they are applicable to the whole tribe of *locusts*, and describe the species too definitely to admit of mistake. The characters sketched are not caricatures, but, unfortunately for the eyes of her majesty's lieges, really exist *in propria persona*.

Feeling assured that the Duke of Wellington would rejoice to see an exposure of such tricksters, I forwarded

to him a copy of *Spectacle Secrets*, and the following acknowledgment was promptly returned :—

Walmer Castle, Nov. 11, 1838.

The Duke of Wellington presents his compliments to Mr. Cox, and has received his letter and the work referred to : he is much obliged to Mr. Cox for the communication.

Copy of a Letter to FREDERICK TYRELL, Esq.

SIR,—The advertisement enclosed frequently appears in the daily and weekly newspapers, to which, as your name is attached, I beg to direct your attention, and solicit an answer to the following questions at your earliest convenience.

1st.—Have you proved the superior efficacy of the Spectacles, (as stated in the advertisement), and consider they merit your unqualified approbation ?

2nd.—Will you oblige me by stating what peculiar advantages you consider them to possess over the usual Spectacles, manufactured by the London opticians ?

3rd.—Does your approval extend to all the Spectacles sold by the advertiser, or to those which he designates Amber Spectacles only ?

I remain, Sir, yours obediently,

GEORGE COX.

To Frederick Tyrell, Esq.

Mr. TYRELL's Reply.

17, New Bridge Street, Blackfriars.

January 29th, 1838.

SIR,—In reply to your letter respecting Mr. — I have to state, First, That I am not acquainted with any institution which is designated “The Royal Eye Infirmary,” to which he states that he is optician. The Royal Ophthalmic Hospital, in Moorfields, is sometimes so called, but Mr. — is not optician to that institution.

Secondly, That Mr. — has not any permission from me to make use of my name in advertisements, as approving of any glass, spectacles, or other articles he may either manufacture or sell.

And thirdly, That I do *not* consider his glasses to be in any respect superior to those manufactured by other persons in the trade.

You are at liberty to make use of this communication in any way you deem proper to counteract Mr. ——'s advertisements.

I remain yours respectfully,

To Mr. George Cox.

FREDERICK TYRELL.

J. Hodson, Esq., consulting Oculist to the Eye Infirmary, Birmingham, resolved upon coming to London to give me his disclaimer, rather than incur any chance of misrepresentation from an unjustifiable use being made of his signature, he being an entire stranger to me before I addressed him upon this subject.

He authorizes me to state that Mr. —— has no authority or right whatever to make use of his name. About four years since a man came to his surgery, and introducing himself as the inventor of roseate tint preservers and amber spectacles, showed him a pair in silver frames, and, expatiating upon their wonderful properties, mentioned the names of several leading surgeons and oculists who had inserted their signatures in a book which he handed to Mr. Hodson, who, without suspecting the design of the knave, added his to the list, for the same reason, he said, that folks do so at a watering place, a library, or as having visited or seen some particular exhibition—in fact, because it was customary to do so. Four or five days afterwards the same individual called again, apparently in great haste, and requested Mr. H. to lend him two sovereigns, as he had immediate occasion for that sum. He produced a pair of amber spectacles, and said, “I will leave these as security until I return the money.” Mr. H. began now to suspect the fellow, and guessed it to be very unlikely

that he would trouble himself to redeem the Spectacles (worth about twelve shillings) if he succeeded in raising two pounds upon them; he therefore referred him to a pawnbroker in the neighbourhood, whose business it was to enter into such arrangements, which were, clearly quite foreign to his, Mr. H.'s practice.

Mr. Hodson has ever since regretted having (though inadvertently) given his signature, which, as the reader will perceive, is solicited as a mere matter of form, and is then made the most unwarrantable use of, involving the parties in many dilemmas, and exposing them to the ridicule and reprehension of every intelligent observer.

The fact is, if one signature of an eminent person can be procured by dint of false representation or plausible pretence, the rest follow as a matter of course; thus Mr. Hodson signed his name, seeing that some of the "heads of colleges" were there inscribed. Mr. Soden, of Bath, gave his signature because Mr. Ledsam had given his; and Mr. Ledsam signed because Mr. Hodson had done so.

Mr. Alexander, Oculist to the Royal Family, was waited upon by one of the crafty crew, whose object was to get his signature at all hazards. The fellow fawned and entreated, but was sternly resisted by Mr. A. who showed him the door, and declared, if he presumed to make use of his name, in his quack advertisements, he would set a solicitor to work immediately.

Copy of a Letter from ROBERT KEATE, Esq., Surgeon in Ordinary
to Her Majesty.

Albemarle Street, July 17, 1838.

SIR,—Although I do not consider myself bound to reply to the questions put to me by you, being in utter ignorance of the use

which you propose to make of my answer; yet I can have no hesitation in saying that I think Mr. —— has been guilty of an unpardonable liberty in publishing my name, without my sanction, and more especially in appending it to the document (a copy of which you sent to me), and to which I have never affixed my signature. I was requested to look at M ——'s amber spectacles, and I saw no others; and looking through them on a day when the sun shone brightly, they appeared to me to soften the light more than crystal or pebbles; and seeing the names of many eminent surgeons and oculists attached to various certificates, I wrote and signed what I have stated above, and I believe no more; namely, that the amber spectacles seemed to *soften the light* more than the pebbles.* I am not aware of having seen any other sort; and certainly I have not ventured to sign my *approval* of these, or of any others.

I am, Sir, your obedient servant,

To Mr. George Cox.

ROBERT KEATE.

I could give the disclaimers of other gentlemen who have been trepanned into giving their signatures, which are afterwards so pompously paraded by the testimonialled and certificated adventurers; but these will suffice to illustrate the working of the system.

“A wise physician, skill'd our wounds to heal,
Is more than armies to the public weal.”—POPE.

I cannot but feel gratified, that this correspondence, while it has substantiated my arguments, affords an opportunity for those gentlemen to explain the real truth

* When the eyes are distressed and overwhelmed with light, *any* shade or screen is viewed with satisfaction. Coloured glasses “soften the light” more naturally, and present to the eye equal and parallel surfaces: parasols, veils, and even opaque substances, may thus be said to shield the eye, and “modify bright and strong light,” but it would be as ridiculous to consider these as fit mediums for the ordinary purposes of vision, as it is to select amber for the purpose.

of the matter, and to exonerate themselves from the contaminating connexion, which appeared to place their reputation for that “quality called honesty” in jeopardy.

I have received several impromptu effusions from humorous correspondents in different parts of the kingdom, where I have been and unmasked the impositions of spectacle cheats. One says—

“They *make* not spectacles, you say;
With that I can’t agree,
Both wife and I have worn their trash,
Now spectacles are we.”—QUIZ.

Another—

“A celebrated chemist has ascertained, by very accurate analysis, that there is enough brass in the countenances of the spectacle men of Duke’s Place and Petticoat Lane to make spectacle-frames for all the spinsters in the neighbourhood.”—SATIRIST.

I have, of course, laid myself open to the furious and vindictive hostility of those quacks, whose nefarious practices are exposed, and whose career will be checked in proportion as this treatise is circulated and dispassionately perused. But, secure of the approbation of all my readers who will avail themselves of the information contained in these pages, I may conclude with satisfaction, since

Friends I have made whom envy must commend,
And not one foe whom I would wish a friend.

THE END.